

Conclusion

EUV lithography devices do indeed have a vacuum or an inert gas atmosphere in their interior, yet the appearance of hydrocarbons and/or other carbon compounds within the device cannot be fully prevented. These carbon compounds lead to the contamination of the optical elements and a resulting loss in reflectivity. In order to counteract this, it has been suggested that while operating the EUV lithography device, the degree of contamination should be constantly monitored, e.g. using quartz crystal microwaves. Depending on the degree of contamination, oxygen is supplied to the interior of the lithography device. The oxygen, in combination with exposure radiation breaks down the contamination while the lithography device is running. The EUV lithography device is thereby equipped with at least one measuring device (3) and a connected control unit (4), which is connected to the oxygen supply (5a).

(Figure).